

Soda Straw Flute

Material: Soda straws, Scissors

Procedure:

On one end of the soda straw, carefully flatten it out. Then, with a sharp pair of scissors, cut the flattened end of the soda straw in a "V" shape. This will act as a reed just like in a woodwind instrument. Place the "V" end of the straw in your mouth so that the "V" end is just past the inside of your lips. Next, apply pressure to the "V" with your lips while blowing. This will take some practice but will make a "musical sound." Next, take your sharp scissors, while blowing, and begin to cut the opposite end of the straw, shortening it.

Rationale:

The length of the straw directly impacts the pitch/frequency of the sound produced. As the straw is shortened, the pitch/frequency of the sound increases.

Application:

eardrums, sound, musical instruments, pitch, frequency, etc.

Make Your Own Lava Lamp

Materials: Empty 2 L Soda Bottle, vegetable oil, water, food coloring, alka seltzer, (Light box-optional)

Advance Prep:

Fill the soda bottle $\frac{3}{4}$ full with the vegetable oil

Procedure:

Show students the water. Show them the food coloring. Explain to them that there are some things that mix well, like water and food coloring. Add food coloring to water, swirl to mix. Show students vegetable oil, show them the colored water. Explain to them that there are some things that do not mix well, like water and oil. Add the colored water to the oil. Show the students that the alka seltzer. Ask them what happens when alka seltzer mixes with water. They will say that it "fizzes". Explain to them that the fizz is a gas that escapes from the water well, but not from the oil well. Place the alka seltzer into the bottle. Watch as the colored water droplets in the oil float to the top as they carry the gas and then sink as they release it. This can also lead to a discussion on density.

Application: Solubility, Immiscibility, Density

